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William L. Botjer
PO Box 478
Center Moriches, NY 11934

EXAMINER
NGUYEN, HAI V

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/087,055	CHOO, KIAM
	Examiner	Art Unit	
	Hai V. Nguyen	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *12 May 2006*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-5,7-16,20-24,27-40 and 44-48* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-5,7-16,20-24,27-40 and 44-48* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to the communication received on 12 May 2006

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 May

2006 has been entered.

3.   Claims 6, 17-19, 25-26, and 41-43 are cancelled.

4.   Claims 1-5, 7-16, 20-24, 27-40, and 44-48 are presented for examination.

Specification

5.   The textual portion of the specification is replete with grammatical and idiomatic

errors too numerous to mention specifically. The specification should be revised

carefully.

6.   The applicant should use this period for response to thoroughly and very closely

proof read and review the whole of the application for correct correlation between

reference numerals in the textual portion of the Specification and Drawings along with

any minor spelling errors, general typographical errors, accuracy, assurance of proper

use for Trademarks ™, and other legal symbols ®, where required, and clarity of

meaning in the Specification, Drawings, and specifically the claims (i.e., provide proper

antecedent basis for "the" and "said" within each claim). Minor typographical errors

could render a Patent unenforceable and so the applicant is strongly encouraged to aid

in this endeavor.

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

8.   Claims 1, 12, 20, 36 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter. The claimed invention is not within

the technological arts.

As an initial matter, the United States Constitution under Art. 1, §8, cl. .8 gave Congress the power to
"[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the
exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized
under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process,
machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a
fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to
the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase
"technological arts" has been created and used by the courts to offer another view of the term "useful arts". See
In re Musgrave, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is
eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been
established to exclude certain subject matter as being patentable subject matter covered by §101. These
exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr,
450, U.S.* 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention
incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory
subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street
Bank & Trust Co. v. Signature Financial* Group, Inc. 149 F.3d 1368, 1973, 47 USPQ2d
(BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an
appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma,* 197 USPQ (BNA) 852
(CCPA 1978). In *Toma,* the court held that the recited mathematical algorithm did not render the claim as a
whole nonstatutory using the Free man-Walter-Abele test as applied to Gottschalk v. *Benson,* 409 U.S. 63,
175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological
arts". The court developed .a "technological arts" analysis:

> The "technological" or "useful" arts inquiry must focus on whether the claimed subject
> matter ...is statutory, not on whether the product of the claimed subject matter...is statutory,

not on whether the prior art which the claimed subject matter purports to replace ...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. In re Toma at 857.

In *Toma,* the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.,* the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Free man-Walter-Abele test used in *Toma.* However, State Street never addressed the second part of the
analysis, i.e., the "technological arts" test established in Toma because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See Ex *pane Bowman,* 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the present application, the limitations and particularly **claims 1, 12, 20 and 36** does not tie in the use of technological arts in the claim. Such as the <u>use of the/a</u> <u>computer</u> to execute the method nor is any other technology employed and it is unclear what step/s, if any, are performed by a computer. Moreover, the claimed subject matter, e.g., the symbiont redirecting the request to a replicate and replicating the symbiont onto the host program based on predetermined birthing rules, do not yield any tangible results.

Claim Rejections - 35 USC § 112

9.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10.   Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for *(When a host h accesses replicate k, it specifies how many times r it has been redirected. k then runs the algorithm as illustrated as flow chart in Fig. 4 (page 4, paragraphs [0045]-[0046]))* does not reasonably provide enablement for *(...and said host has not been redirected more than a predetermined number of times in claims 1, 27)*. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Even though in Applicant's specification, it enables that *(when a host h accesses replicate k, it specifies how many times r it has been redirected. k then runs the algorithm as illustrated as flow chart in Fig. 4 (page 4, paragraphs [0045]-[0046])* but Applicant's specification does not enable *(how does the host determine or specify a predetermined number of times that the host has been redirected?)*, which is claimed in the claim language.

Additionally, in Applicant's remark received on 28 September 2005, on page 18, Applicant pointed out that, *"the replication takes place if the load on the symbiont exceeds a threshold l_{max} and if the request has been redirected more than a specific number of times, r_{max}"*. It is clearly that this remark is not supported in the specification or as claimed.

Claim Rejections - 35 USC § 112

11.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12.   Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13.   Claim 1 recites the limitation "serving said request if the load on said symbiont is less than a threshold, t_{max}; replicating said resource on said host, if the load on said symbiont is more than the threshold, Imax, and the load on all symbionts encapsulating said resource, is more than a threshold, t; replicating said resource on said host, if the load on said symbiont is more than the threshold, I_{max}, and said host has been redirected more than a predetermined number of times; and redirecting said request to the replicate if the load on said symbiont is more than the threshold, I_{max}, and at least one of the symbionts encapsulating said resource has a load less than the threshold, t, and said host has not been redirected more than a predetermined number of times " in claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

14.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

> only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. Claims 1-5, 7-16, 20-24, 27-40, and 44-48 are rejected under 35 U.S.C. 102(e) as being anticipated by **Abrams** et al. U.S. patent application publication #

2002/0166117 A1.

16. As to claim 1, Abrams teaches substantially the invention as claimed, including a method for handling a request for a resource *(request for an instance of application)*, said request being made by applications *(application stack)* running on a computer *(Fig. 13, a server 354)*, the computer being part of a network of computers, each computer on said network comprising a host program *(Fig. 13, an edge point 350)*, each said host program comprising symbionts *(Fig. 13, items 220a-f)*, said symbionts encapsulating resources, said method comprising the steps of:

a. said host program receiving said request for said resource from said applications *(Fig. 13, page 8, paragraphs [0073]-[0077])*;

b. said host program contacting a symbiont that encapsulates said resource *(Fig. 13, page 8, paragraphs [0073]-[0077])*; and

c. said symbiont performing one of the steps of:

i/ serving said request if the load on said symbiont is less than a threshold, I_{max} *(Figs. 13-15, page 8, paragraph [0073] – page 10, paragraph [0087])*;

ii/ replicating said resource on said host, if the load on said symbiont is more than the threshold, I_{max}, and the load on all symbionts encapsulating said resource, is more than a threshold, t, *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 8,*

paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119];

pages 15-16, paragraphs [0136]-[0141]);

iii/ replicating said resource on said host, if the load on said symbiont is more than

the threshold, I_{max}, and said host has been redirected more than a predetermined

number of times *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 8,*

paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119];

pages 15-16, paragraphs [0136]-[0141]); and

iv/ redirecting said request to the replicate if the load on said symbiont is more than

the threshold, I_{max}, and at least one of the symbionts encapsulating said resource has a

load less than the threshold, t, and said host has not been redirected more than a

predetermined number of times *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024];*

page 8, paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs

[0110]-[0119]; pages 15-16, paragraphs [0136]-[0141]).

17.   As to claim 2, Abrams teaches, wherein said host program exposes one or more

symbionts available on said network to said applications running on said computer *(Fig.*

13, pages 2-3, paragraphs [0019]-[000024]; page 8, paragraphs [0073]-[0077]).

18.   As to claim 3, Abrams teaches, wherein said host program exposes said

symbionts available on said host program to said network *(Fig. 13, pages 2-3,*

paragraphs [0019]-[000024]; page 8, paragraphs [0073]-[0077]).

19.   As to claim 4, Abrams teaches, wherein replicates of said resource is connected

together, to support a measure of communication among said replicates *(Figs. 14-15,*

pages 2-3, paragraphs [0019]-[000024]; page 9, paragraphs [0080]-[0087]).

20.   As to claim 5, Abrams teaches, wherein said various replicates of said symbiont are connected together in a multiply connected ring *(Figs. 14-15, the ring 126; pages 2-3, paragraphs [0019]-[000024]; page 9, paragraphs [0080]-[0087])*.

21.   As to claim 7, Abrams teaches, wherein said threshold, I_{max}, of said symbiont, is lowered to increase the number of replicates according to a predetermined probabilistic measure *(Fig. 22)*.

22.   As to claim 8, Abrams teaches, wherein said threshold, t, of symbionts encapsulating said replicate of said resource is less than said threshold, I_{max} of said symbiont *(Fig. 22)*.

23.   As to claim 9, Abrams teaches, wherein said threshold, t, of symbiont encapsulating said replicate of said resource, evolves with time according to some probabilistic measure *(Fig. 22)*.

24.   As to claim 10, Abrams teaches, wherein said request is redirected to said replicate, encapsulating in a symbiont with least load serving said request *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 8, paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141])*.

25.   As to claim 11, Abrams teaches, wherein said request is redirected to a replicate encapsulated in a symbiont closet to said host *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 8, paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141])*.

26.   Claim 12 is corresponding system claim of claim 1; therefore, it is rejected under the same rationale as in claim 1.

27.   Claims 13-16 are similar limitations of claims 2-5; therefore, they are rejected under the same rationale as in claims 2-5.

28.   As to claim 20, Abrams teaches a method for arranging resources in a network of computers, said computers on said network comprising host programs, said host programs comprising symbionts, said symbionts encapsulating said resources, said method comprising the steps of:

a. connecting resources in the form of multiply ring *(Figs. 14-15)*;

b. replicating a symbiont encapsulating a resource on a host program based on predetermined birthing rules *(the encapsulation of an appshot 220 allows the on-demand system 140 to replicate an application and provide plurality of instances of the same time application to be operated at substantially the same time utilizing a plurality of subsets of the on-demand computational resources. The application allows the on-demand system 140, among other things, to move the appshot 220 to another set of compute resources such as another server, computer or machine, to duplicate the appshot 220 to other servers, and to replace or upgrade an appshot 220; Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 6, paragraphs [0065]-[0068]; page 8, paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141])*;

c. joining replicate of said resource to said multiply connected ring *(Figs. 14-15)*; and

d. one of said symbionts encapsulating said resource, ceasing to exist from said multiply connected ring based on predetermined death rules *(the encapsulated appshot 220 allows the on-demand system 140 to put an application when operating as in instance of an application into a form which allows the system to remove the instance of the application from an idle server when the application instance associated with an appshot 220 is not being used; Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 6, paragraphs [0065]-[0068]; page 8, paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141])*

29.   Claims 21-24 are similar limitations of claims 2-5; therefore, they are rejected under the same rationale as in claims 2-5.

30.   As to claim 27, Abrams teaches, wherein said step of replicating a symbiont encapsulating a resource based on birthing rules is performed when any one of the following conditions is satisfied:

a. the load on said symbiont is more than a threshold Imax, and the load on all symbiont encapsulating said resource, is more than a threshold, t *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 6, paragraphs [0065]-[0068]; page 8, paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141])*; and

b. the load on said symbiont is more than the threshold, I_{max}, and said host program has been redirected more than a predetermined number of times *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 6, paragraphs [0065]-[0068]; page 8,*

paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141]).

31.   Claims 28-30 have similar limitations of claims 7-9; therefore, they are rejected under the same rationale as in claims 7-9.

32.   As to claim 31, Abrams teaches, further comprises the steps of: a. marking new one of said symbionts encapsulating said new resource, as immortal *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 6, paragraphs [0065]-[0068]; page 8, paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141]);*

33.   As to claim 32, Abrams teaches, wherein said step of one of said symbionts encapsulating said resource, ceasing to exist from said multiply connected ring based on predetermined death rules, comprises the steps of:

a. said symbionts checking their loads at regular time intervals *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 6, paragraphs [0065]-[0068]; page 8, paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141]);* and

b. said symbionts dying if their load is less than a threshold, I_{min} *(Figs. 13-15, pages 2-3, paragraphs [0019]-[000024]; page 6, paragraphs [0065]-[0068]; page 8, paragraph [0073] – page 10, paragraph [0087]; pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141]).*

34.   As to claim 33, Abrams teaches, wherein said time intervals depend on time scale of natural fluctuations in the load on a symbiont *(Fig. 22).*

35.   As to claim 34, Abrams teaches, wherein said threshold, I_{min}, depends on the

number of said symbionts *(Fig. 22)*.

36.   As to claim 35, Abrams teaches, wherein said symbionts marked immortal never

cease to exist *(Figs. 13-14, 22; pages 2-3, paragraphs [0019]-[000024]; page 6,*

paragraphs [0065]-[0068]; page 8, paragraph [0073] – page 10, paragraph [0087];

pages 13-14, paragraphs [0110]-[0119]; pages 15-16, paragraphs [0136]-[0141]).

37.   Claim 36 is corresponding system claim of claim 20; therefore, it is rejected

under the same rationale as in claim 20.

38.   Claims 37-40 have similar limitations of claims 21-24; therefore, they are rejected

under the same rationale as in claims 21-24.

39.   Claims 44-48 have similar limitations of claims 31-35; therefore, they are rejected

under the same rationale as in claims 31-35.

40.   Further references of interest are cited on Form PTO-892, which is an

attachment to this action.

Response to Arguments

41.   Applicant's arguments filed on 12 May 2006 have been fully considered but they

are not persuasive.

42.   In the remark, Applicant argued in substance that:

Point (A), the prior art does not disclose that, "a resource can be replicated on a

requesting client".

As to point (A), Abrams discloses that, *"when an entity 124, such as a user, a*

separate application, a server, a process, computational device and substantially any

other entity capable of issuing requests for application processing, wants to access the

application or site, the edgepoint 350 activates or restores the appshot 220 to an

activate instance of the application or applications encapsulated within the appshot 220

and the appshot 220 is capable of being restored or reactivated when needed" (Abram,

paragraph [0068]).

Point (B), the prior art does not disclose "any logical connection between the

object replicates" in claims 4, 15, 23 and 39.

As to point (B), In response to applicant's argument that the references fail to

show certain features of applicant's invention, it is noted that the features upon which

applicant relies (i.e., *logical connection*) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the

specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26

USPQ2d 1057 (Fed. Cir. 1993).

Point (C), the prior art does not provide "any flexibility to alter the tradeoff

between the networking load and the load for resources" in claims 5, 16, 24 and 40.

As to point (C), In response to applicant's argument that the references fail

to show certain features of applicant's invention, it is noted that the features upon which

applicant relies (i.e., *any flexibility to alter the tradeoff between the networking load and*

the load for resources) are not recited in the rejected claim(s). Although the claims are

interpreted in light of the specification, limitations from the specification are not read into

the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Point (D), the prior art does not disclose "the use of two thresholds, Imax and t" in

claims 7-9, 28-30.

As to point (D), Abrams disclose in Figure 22, the use of two thresholds, Imax

(either the line representing the prior art total capacity or the line representing total

capacity with inventive system method embodiment) and t, the load graph of

application1 or the load graph of application2.

Point (E), the prior art does not disclose "the intelligence to check the load on

different symbionts providing the desired application" in claims 10-11.

As to point (E), In response to applicant's argument that the references fail

to show certain features of applicant's invention, it is noted that the features upon which

applicant relies (i.e., *the intelligence to check the load on different symbionts providing*

the desired application) are not recited in the rejected claim(s). Although the claims are

interpreted in light of the specification, limitations from the specification are not read into

the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Point (F), the prior art does not disclose "the use of two thresholds, Imax and t

and the relation between them" in claim 27.

As to point (D), Abrams disclose in Figure 22, the use of two thresholds, Imax

(either the line representing the prior art total capacity or the line representing total

capacity with inventive system method embodiment) and t, the load graph of

application1 or the load graph of application2 and in figure 13B that, *"Referring to FIG.*

13B, once a server 354a is running the application instance 356a, the application 356a

is fully active and operating, so that additional users 124b can be routed to and gain

access to the active application 356a. Because the application 356a is already active,

additional users 124b get an immediate response with substantially no delay. However,

as more users request access to the application 356a, the response time begins to

suffer, and the effectiveness of this application begins to deteriorate because the

application 356a becomes overloaded. As additional users 124c attempt to access the

instance of the application 356a response time degrades. In one embodiment, a

predetermined response time threshold or limit is set, or a predefined number of users

is set which limits the number of users allowed to access one instance of an application.

Thus, when a new user 124c attempts to access the application 356a, and this new

user 124c exceeds the predefined threshold, the edgepoint 350 activates the appshot

220b to initiate a second instance of the application 356b. Thus, this demonstrates the

ability of the present invention to provide capacity on the run or on-demand, and provide

an optimal response time for the applications 356a-f (paragraph 0074])".

Point (G), the prior art does not disclose the marking of any one symbiont as an

immortal entity in claims 31, 35, 44, 48.

As to point (G), Abrams discloses the marking of any application, applications

356a, 356b, as an activated entity or deactivated entity *(paragraph [0074]).*

Point (H), the prior art does not discloses checking the number of users

accessing it at predetermined time intervals.

As to point (H), Abrams discloses in Figs. 13, 22 the checking of the number of

users accessing at the predetermined time intervals *(paragraphs [0074], [0131], [0145]-*

[0148]).

Point (I), the prior art does not disclose the symbionts checking the load on

themselves at regular time intervals" in claims 33-34, 46-47.

As to point (I), Abrams discloses in Figs. 13, 22 the checking the load at regular

time intervals *(paragraphs [0074], [0131], [0145]-[0148])*.

Claim Rejections - 35 USC § 103

43.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

44.   Claims 1-5, 7-16, 20-24, 27-40, and 44-48 are rejected under 35 U.S.C. 102(e)

as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over

Lanzillo, JR. et al. US patent application publication # **2002/0032602 A1**.

45.   Lanzillo taught the invention substantially as claimed (e.g., as in exemplary claim

12) including a host program *(the Primary Master Controller (PMC))* receiving a request

for a resource from applications *(the queue negotiations between all messaging

agents)*; contacting a symbiont that encapsulates the resource *(the agent 22 is

responsible for all message queue negotiation and coordination of system resources

and load balancing)*; and the symbiont replicating the resource onto the computer (*each

server or workstation, configured to run any of the messaging agents, must run a copy

of the MC agent 22) (Lanzillo, paragraphs [0024], [0033], [0044]-[0052])*.

46.   It would have been obvious to one of ordinary skill in the networking art at the time of the invention the claimed invention differed from the teachings of Lanzillo only by a degree, e.g., in the claimed symbiont. But this is no more than a difference in a degree because whether they are designated as a symbiont or a MC agent taught by Lanzillo, they provide balancing the computational and network load among data or computational services. The heart of the invention is providing symbiont(s) used as computer program(s) to balance the computational and network load among data or computational services *(Applicant's specification, Abstract, summary of the invention)*. Lanzillo exactly was directly to the same purpose, i.e., agents can reside on any computer on a local area network and this allows to run these processes across many systems to provide virtually unlimited scalability as system load increases and running multiple instances of any agent on any number of machines can further enhance load balancing *(Lanzillo, paragraph 0051])*. Other claimed elements of the dependent claims are all obvious variation of the well known features of load balancing and rejected accordingly.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai V. Nguyen whose telephone number is 571-272-3901. The examiner can normally be reached on 6:00-3:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hai V. Nguyen
Examiner
Art Unit 2142